WHAT IS CLAIMED IS:

1. An array comprising a substrate and an array of MHC molecules complexed with antigen-derived peptides immobilized in spatially-distinct areas on the substrate.
2. The array of claim 1, wherein the MHC molecules in all of the spatially-distinct areas are the same.
3. The array of claim 1, wherein the spatially-distinct areas are surrounded by a hydrophobic barrier.
4. The array of claim 1, wherein the spatially-distinct areas are each surrounded by a hydrophobic barrier.
5. The array of claim 1, wherein the array comprises at least about 10, 50, or 100 different MHC-peptide complexes.
6. The array of claim 1, wherein the substrate is optically transparent.
7. The array of claim 1, wherein the substrate comprises glass, quartz, polystyrene, polycarbonate, polypropylene, polymethacrylate, or silicon.
8. The array of claim 1, wherein the substrate is coated with gold, biotin streptavidin, or another molecule used to immobilize the MHC molecules.
9. The array of claim 1, wherein the MHC-peptide complexes are immobilized on the substrate via the MHC molecule, which is immobilized via direct adsorption, peptide linkers, biotin-streptavidin; cysteine attachment; amine attachment; or metal chelate interaction.
10. The array of claim 1, wherein the MHC-peptide complexes are immobilized on the substrate via the antigen-derived peptide, which is immobilized via direct adsorption; peptide linkers; biotin-streptavidin; cysteine attachment; amine attachment; or metal chelate interaction.
11. An array comprising a substrate and an array of MHC molecules complexed with antigen-derived peptides and costimulatory molecules immobilized in spatially-distinct areas on the substrate.

12. The array of claim 11, wherein the costimulatory molecules are selected from the group consisting of costimulatory antibodies and costimulatory agents.

13. The array of claim 12, wherein the costimulatory antibodies bind specifically to one or more of CD2, CD11a, CD28, or CD49d.

14. The array of claim 11, wherein the costimulatory agent is B7-1, B7-2, ICOSL, B7-H1, B7-DC, B7-H3, B7-H4, LFA-3, ICAM-1, or ICAM-2.

15. The array of claim 11, wherein the array comprises at least about 10, 50, or 100 different MHC-peptide complexes.

16. The array of claim 11, wherein the MHC molecules comprise Class I MHC molecules, Class II MHC molecules, or Class I and Class II MHC molecules.

17. The array of claim 11, wherein the MHC-peptide complexes are immobilized on the substrate via the MHC molecule, which is immobilized via direct adsorption, peptide linkers, biotin-streptavidin; cysteine attachment; amine attachment; or metal chelate interaction.

18. The array of claim 11, wherein the MHC-peptide complexes are immobilized on the substrate via the antigen-derived peptide, which is immobilized via direct adsorption; peptide linkers; biotin-streptavidin; cysteine attachment; amine attachment; or metal chelate interaction.

19. An array comprising a substrate and an array of MHC molecules complexed with antigen-derived peptides, and anti-factor antibodies specific for secreted factors, immobilized in spatially-distinct areas on the substrate.

20. The array of claim 19, wherein the immobilized anti-factor antibodies bind specifically to one or more of IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-10, IL-12, IL-13, IL-16, interferon-gamma (IFN-γ), tumor necrosis factor alpha (TNF-α), tumor necrosis factor beta (TNF-β), GM-CSF, oncostatin M (OSM), macrophage migration inhibitory factor (MIF), TNF-Related Apoptosis Inducing Ligand (TRAIL), 4-1BB ligand (4-1BBL), or alpha-defensin.

21. The array of claim 18, wherein the array comprises at least about 10, 50, or 100 different MHC-peptide complexes.

22. The array of claim 18, wherein the MHC molecules comprise Class I MHC molecules, Class II MHC molecules, or Class I and Class II MHC molecules.

23. The array of claim 18, wherein the MHC-peptide complexes are immobilized on the substrate via the MHC molecule, which is immobilized via direct adsorption, peptide linkers, biotin-streptavidin; cysteine attachment; amine attachment; or metal chelate interaction.

24. The array of claim 18, wherein the MHC-peptide complexes are immobilized on the substrate via the antigen-derived peptide, which is immobilized via direct adsorption; peptide linkers; biotin-streptavidin; cysteine attachment; amine attachment; or metal chelate interaction.

25. The array of claim 11, further comprising anti-factor antibodies specific for secreted factors immobilized in spatially-distinct areas on the substrate.

26. A method for identifying a T cell epitope, the method comprising:

providing an array comprising a substrate and an array of MHC molecules complexed with antigen-derived peptides immobilized in spatially-distinct areas on the substrate;

contacting the array with a sample comprising T cells;

detecting a T cell interaction with an MHC-peptide complex; and

identifying the T cell epitope based on the identity of the MHC-peptide complex.

27. The method of claim 26, wherein the interaction is detected by detecting activation of T cells by one or more of factor secretion, expression of an activation marker, or an intracellular signal.

28. The method of claim 27, wherein the intracellular signal is calcium flux.

29. The method of claim 27, wherein the activation marker is CD3, CD4, CD8, Cd11a, CD25, CD27, CD28, CD44, CD49e, CD62L, CD69, CD71, CD95, CD152, or Ly6A.

30. The method of claim 27, wherein the secreted factor is IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-10, IL-12, IL-13, IL-16, interferon-gamma, tumor necrosis factor alpha, TNF-b, GM-CSF, oncostatin M, macrophage migration inhibitory factor, TNF-Related Apoptosis Inducing Ligand, 4-1BB ligand, α-defensin, or CD40 ligand.

31. The method of claim 26, wherein the interaction is detected by detecting expression of CD40 ligand, CD30 ligand, CD27 ligand, or Fas ligand.

32. The method of claim 26, wherein the array further comprises immobilized anti-factor antibodies, and factor secretion is detected by detecting binding of a factor to an immobilized anti-factor antibody.

33. The method of claim 32, wherein the factor is IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-10, IL-12, IL-13, IL-16, interferon-gamma, tumor necrosis factor alpha, TNF-b, GM-CSF, oncostatin M, macrophage migration inhibitory factor, TNF-Related Apoptosis Inducing Ligand, 4-1BB ligand, or α-defensin.

34. A method of making an array, the method comprising providing a substrate, and immobilizing MHC molecules complexed with antigen-derived peptides in spatially-distinct areas on the substrate.

35. The method of claim 34, wherein the MHC molecules in all of the spatially-distinct areas are the same.

36. The method of claim 34, further comprising surrounding the spatially-distinct areas with a hydrophobic barrier.

37. The method of claim 34, further comprising surrounding each one of the spatially-distinct areas with a hydrophobic barrier.

38. The method of claim 34, wherein the array comprises at least about 10, 50, or 100 different MHC-peptide complexes.

39. The method of claim 34, wherein the MHC molecules comprise Class I MHC molecules, Class II MHC molecules, or Class I and Class II MHC molecules.

40. The method of claim 34, wherein the substrate is optically transparent.

41. The method of claim 34, wherein the substrate comprises glass, quartz, polystyrene, polycarbonate, polypropylene, polymethacrylate, or silicon.

42. The method of claim 34, wherein the substrate is coated with gold, biotin streptavidin, or another molecule used to immobilize the MHC molecules.

43. The method of claim 34, wherein the MHC-peptide complexes are immobilized on the substrate via the MHC molecule, which is immobilized via direct adsorption, peptide linkers, biotin-streptavidin; cysteine attachment; amine attachment; or metal chelate interaction.

44. The method of claim 34, wherein the MHC-peptide complexes are immobilized on the substrate via the antigen-derived peptide, which is immobilized via direct adsorption; peptide linkers; biotin-streptavidin; cysteine attachment; amine attachment; or metal chelate interaction.

45. The method of claim 34, further comprising immobilizing costimulatory molecules on the substrate.

46. The method of claim 45, wherein the costimulatory molecules are selected from the group consisting of costimulatory antibodies and costimulatory agents.

47. The method of claim 46, wherein the costimulatory antibodies are one or more of anti-CD2, anti-CD11a, anti-CD28, or anti-CD49d.

48. The method of claim 46, wherein the costimulatory agent is B7-1, B7-2, ICOSL, B7-H1, B7-DC, B7-H3, B7-H4, LFA-3, ICAM-1, or ICAM-2.

49. The method of claim 34, further comprising immobilizing anti-factor antibodies specific for secreted factors on the substrate.

50. The method of claim 49, wherein the immobilized anti-factor antibodies comprise at least about one of antibodies specific for IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-10, IL-12, IL-13, IL-16, IFN-γ, TNF-α, TNF-β, GM-CSF, oncostatin M, macrophage migration inhibitory factor, TNF-Related Apoptosis Inducing Ligand, 4-1BB ligand, or alpha-defensin.

51. The method of claim 45, further comprising immobilizing anti-factor antibodies specific for secreted factors on the substrate.

52. The method of claim 51, wherein the immobilized anti-factor antibodies comprise at least about one of antibodies specific for IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-10, IL-12, IL-13, IL-16, IFN-γ, TNF-α, TNF-β, GM-CSF, oncostatin M, macrophage migration

inhibitory factor, TNF-Related Apoptosis Inducing Ligand, 4-1BB ligand, or alpha-defensin.